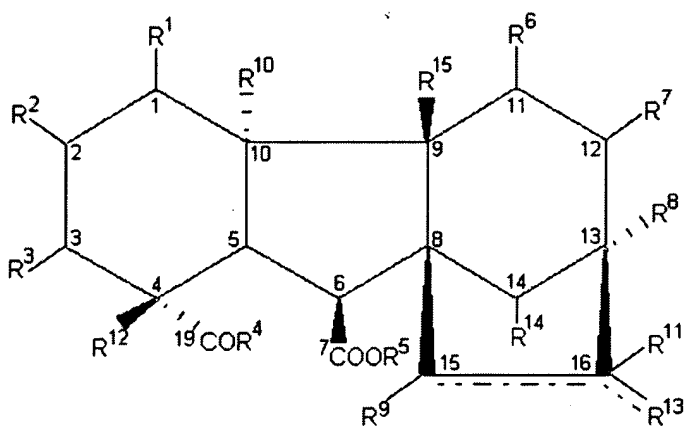


**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Previously presented) A method of treatment for Type II diabetes and its complications and associated conditions, comprising administering compounds selected from Formula (1) (Gibberellins)



Formula (1)

wherein

R<sup>1</sup> is H or a group -O-R<sup>20</sup>, where R<sup>20</sup> is H, a glycosylic ether group (glycoside ether), C<sub>1-6</sub> alkyl group, or R<sup>1</sup> together with R<sup>2</sup> or R<sup>10</sup> forms a bond (C<sub>1</sub>-C<sub>2</sub> or C<sub>1</sub>-C<sub>10</sub> double bond, respectively);

R<sup>2</sup> is H or a group -O-R<sup>21</sup>, where R<sup>21</sup> is H, a glycosylic ether group (glycoside ether), or together with R<sup>4</sup> forms a bond (lactone) or R<sup>2</sup> together with R<sup>1</sup> or R<sup>3</sup> forms a bond (C<sub>1</sub>-C<sub>2</sub> or C<sub>2</sub>-C<sub>3</sub> double bond, respectively);

$R^3$  is H, =O, or  $-O-R^{22}$ , where  $R^{22}$  is H or a glycosylic ether group (glycoside ether), or  $R^3$  together with  $R^2$  forms a bond ( $C_2-C_3$  double bond);

$R^4$  is OH, or  $-OR^{23}$ , where  $R^{23}$  is unsubstituted or substituted  $C_{1-20}$  alkyl, allyl, amidine, or  $-NR^{24}R^{25}$ ;  $R^{24}$  and  $R^{25}$  may or may not be the same, are hydrogen,  $C_{1-20}$  alkyl, or allyl; or  $R^4$  together with  $R^{21}$  or  $R^{28}$  forms a bond (lactone);

$R^5$  is H or a glycosylic ester (glycoside ester) group, or unsubstituted or substituted  $C_{1-20}$  alkyl esters, allyl esters, active esters;

$R^6$  is H or OH or together with  $R^7$  forms a bond ( $C_{11}-C_{12}$  double bond);

$R^7$  is H, =O, or  $-OR^{26}$ , where  $R^{26}$  is H or a glycosylic ether group (glycoside ether) or  $R^7$  together with  $R^6$  forms a bond ( $C_{11}-C_{12}$  double bond);

$R^8$  is H, hydroxyl, mercaptan, or halogen, amino, azido,  $NR^{24}R^{25}$ , unsubstituted or substituted  $C_{1-20}$  alkyl or allyl or  $-OR^{27}$ , where  $R^{27}$  is a glycosylic ether group (glycoside ether);

$R^9$  is H or OH, or together with  $R^{15}$  forms a bond ( $C_9-C_{15}$  bond);

$R^{10}$  is H,  $CH_3$ , CHO, COOH, or a glycosylic ester (glycoside ester) of said COOH,  $CH_2O-R^{28}$  or  $-OR^{28}$ , where  $R^{28}$  is H or together with  $R^4$  forms a bond (lactone) or  $R^{10}$  together with  $R^1$  forms a bond ( $C_1-C_{10}$  double bond);

$R^{11}$  is H, or OH or is absent;

$R^{12}$  is  $CH_3$ ,  $CH_2OH$ , COOH or a glycosylic ester (glycoside ester) of said COOH;

$R^{13}$  is methylene, or a divalent hetero-atom, or  $NR^{29}$ , where  $R^{29}$  is  $NHR^{30}$  or  $OR^{30}$  where  $R^{30}$  is H, or  $C_{1-20}$  alkyl; and a double bond is present between  $C_{16}$  and  $R^{13}$  when  $R^{11}$  is absent; or  $R^{13}$  is H, OH,  $CH_3$  CHO,  $CH_2X$ , where X is halogen,  $CHNR^{29}$  where  $R^{29}$  is  $NHR^{30}$  or  $OR^{30}$  where  $R^{30}$  is H or  $C_{1-20}$  alkyl when  $R^{11}$  is H or OH; with the proviso that where  $R^{11}$  is OH,  $R^{13}$  is not OH;

$R^{14}$  is H or OH;

$R^{15}$  is H, or together with  $R^9$  forms a bond ( $C_9$ - $C_{15}$  bond);

and its pharmaceutically acceptable lactones, esters, active esters, salts and organic bases, to a patient in need thereof.

2. (Original) The method of claim 1, wherein the complications and associated conditions of diabetes are one or more of: obesity, micro and macro vascular diseases, nephropathy, neuropathy, eye diseases, and diabetic ulcerations.

3. (Original) The method of claim 1, wherein the Gibberellins are Gibberellin  $A_3$ .

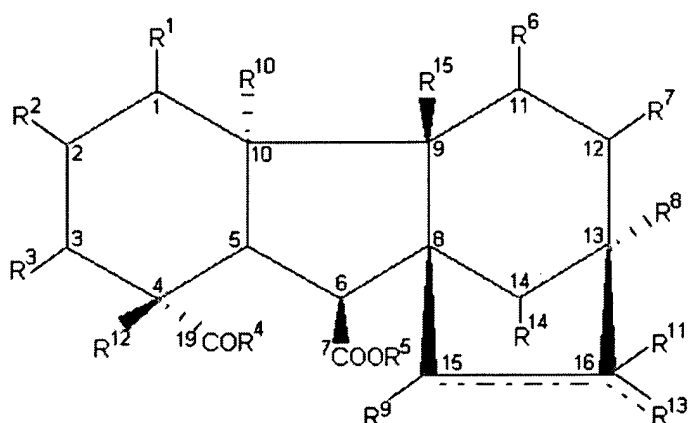
4. (Original) The method of claim 1, wherein the Gibberellins are a mixture of Gibberellin  $A_3$  and Gibberellin  $A_4$  and/or Gibberellin  $A_7$ .

5. (Previously presented) The method of claim 1, wherein the pharmaceutically acceptable salts are selected from alkali metal salts, alkaline earth metal salts, metal, and salts of ammonium or organic bases.

6. (Original) The method of claim 5, wherein the organic bases are lidocaine, or  $NR^{16} R^{17} R^{18} R^{19}$ , where  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$ ,  $R^{19}$ , which may be the same or not the same, are hydrogen, or substituted or unsubstituted  $C_{1-20}$  alkyl, alkanol, or aryl groups.

7. (Canceled)

8. (Previously presented) A method of treatment for Type II diabetes and its complications and associated conditions comprising administering a compound selected from formula (1) (Gibberellins)



Formula (1)

wherein

$R^1$  is H or a group  $-O-R^{20}$ , where  $R^{20}$  is H, a glycosylic ether group (glycoside ether),  $C_{1-6}$  alkyl group, or  $R^1$  together with  $R^2$  or  $R^{10}$  forms a bond ( $C_1-C_2$  or  $C_1-C_{10}$  double bond, respectively);

$R^2$  is H or a group  $-O-R^{21}$ , where  $R^{21}$  is H, a glycosylic ether group (glycoside ether), or together with  $R^4$  forms a bond (lactone) or  $R^2$  together with  $R^1$  or  $R^3$  forms a bond ( $C_1-C_2$  or  $C_2-C_3$  double bond, respectively);

$R^3$  is H, =O, or  $-O-R^{22}$ , where  $R^{22}$  is H or a glycosylic ether group (glycoside ether), or  $R^3$  together with  $R^2$  forms a bond ( $C_2-C_3$  double bond);

$R^4$  is OH, or  $-OR^{23}$ , where  $R^{23}$  is unsubstituted or substituted  $C_{1-20}$  alkyl, allyl, amidine, or  $-NR^{24}R^{25}$ ;  $R^{24}$  and  $R^{25}$  may or may not be the same, are hydrogen, or  $C_{1-20}$  alkyl, or allyl; or  $R^4$  together with  $R^{21}$  or  $R^{28}$  forms a bond (lactone);

$R^5$  is H or a glycosylic ester (glycoside ester) group, or unsubstituted or substituted  $C_{1-20}$  alkyl esters, allyl esters, active esters;

$R^6$  is H or OH or together with  $R^7$  forms a bond ( $C_{11}-C_{12}$  double bond);

$R^7$  is H, =O, or  $-OR^{26}$ , where  $R^{26}$  is H or a glycosylic ether group (glycoside ether) or  $R^7$  together with  $R^6$  forms a bond ( $C_{11}-C_{12}$  double bond);

$R^8$  is H, hydroxyl, mercaptan, or halogen, amino, azido,  $NR^{24}R^{25}$ , unsubstituted or substituted  $C_{1-20}$  alkyl or allyl, or  $-OR^{27}$ , where  $R^{27}$  is a glycosylic ether group (glycoside ether);

$R^9$  is H or OH, or together with  $R^{15}$  forms a bond ( $C_9-C_{15}$  bond);

$R^{10}$  is H,  $CH_3$ , CHO, COOH, or a glycosylic ester (glycoside ester) of said COOH,  $CH_2O-R^{28}$  or  $-OR^{28}$ , where  $R^{28}$  is H or together with  $R^4$  forms a bond (lactone) or  $R^{10}$  together with  $R^1$  forms a bond ( $C_1-C_{10}$  double bond);

$R^{11}$  is H, or OH or is absent;

$R^{12}$  is  $CH_3$ ,  $CH_2OH$ , COOH or a glycosylic ester (glycoside ester) of said COOH;

$R^{13}$  is methylene, or a divalent hetero-atom, or  $NR^{29}$ , where  $R^{29}$  is  $NHR^{30}$  or  $OR^{30}$  where  $R^{30}$  is H, or  $C_{1-20}$  alkyl; and a double bond is present between  $C_{16}$  and  $R^{13}$  when  $R^{11}$  is absent; or  $R^{13}$  is H, OH,  $CH_3$  CHO,  $CH_2X$ , where X is halogen,  $CHNR^{29}$

where  $R^{29}$  is  $NHR^{30}$  or  $OR^{30}$  where  $R^{30}$  is H or  $C_{1-20}$  alkyl when  $R^{11}$  is H or OH; with the proviso that where  $R^{11}$  is OH,  $R^{13}$  is not OH;

$R^{14}$  is H or OH;

$R^{15}$  is H, or together with  $R^9$  forms a bond ( $C_9-C_{15}$  bond);

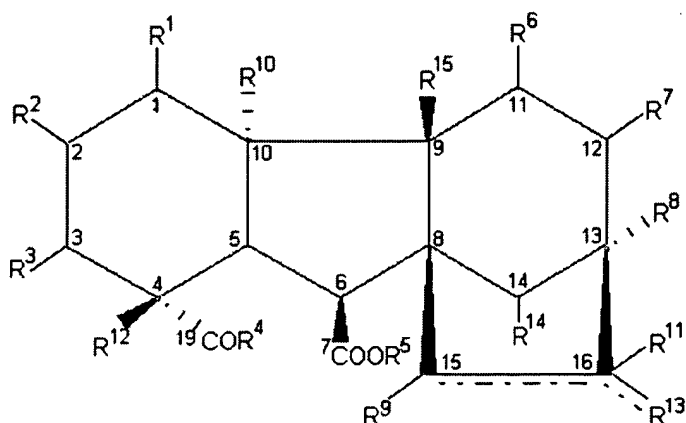
and its pharmaceutically acceptable lactones, esters, active esters, salts and organic bases,

in combination with other compatible therapeutic agents selected from the group consisting of analgesics, anti-hypertensive agents, sedatives, hypnotics, lipid-lowering agents, and anti-infective agents or combinations thereof, to a patient in need thereof.

9. (Previously presented) A method according to claim 11, wherein the Gibberellins are Gibberellin  $A_3$ .

10. (Previously presented) A method according to claim 11, wherein the Gibberellins are a mixture of Gibberellin  $A_3$  and Gibberellin  $A_4$  and/or Gibberellin  $A_7$ .

11. (Previously presented) A method of treatment for Type I and Type II diabetes and its complications and associated conditions comprising administering compounds selected from formula (1) (Gibberellins)



Formula (1)

wherein

$R^1$  is H or a group  $-O-R^{20}$ , where  $R^{20}$  is H, a glycosylic ether group (glycoside ether),  $C_{1-6}$  alkyl group, or  $R^1$  together with  $R^2$  or  $R^{10}$  forms a bond ( $C_1-C_2$  or  $C_1-C_{10}$  double bond, respectively);

$R^2$  is H or a group  $-O-R^{21}$ , where  $R^{21}$  is H, a glycosylic ether group (glycoside ether), or together with  $R^4$  forms a bond (lactone) or  $R^2$  together with  $R^1$  or  $R^3$  forms a bond ( $C_1-C_2$  or  $C_2-C_3$  double bond, respectively);

$R^3$  is H,  $=O$ , or  $-O-R^{22}$ , where  $R^{22}$  is H or a glycosylic ether group (glycoside ether), or  $R^3$  together with  $R^2$  forms a bond ( $C_2-C_3$  double bond);

$R^4$  is OH, or  $-OR^{23}$ , where  $R^{23}$  is unsubstituted or substituted  $C_{1-20}$  alkyl, allyl, amidine, or  $-NR^{24}R^{25}$ ;  $R^{24}$  and  $R^{25}$  may or may not be the same, are hydrogen,  $C_{1-20}$  alkyl, or allyl; or  $R^4$  together with  $R^{21}$  or  $R^{28}$  forms a bond (lactone);

$R^5$  is H or a glycosylic ester (glycoside ester) group, or unsubstituted or substituted  $C_{1-20}$  alkyl esters, allyl esters, active esters;

$R^6$  is H or OH or together with  $R^7$  forms a bond ( $C_{11}$ - $C_{12}$  double bond);

$R^7$  is H, =O, or  $-OR^{26}$ , where  $R^{26}$  is H or a glycosylic ether group (glycoside ether) or  $R^7$  together with  $R^6$  forms a bond ( $C_{11}$ - $C_{12}$  double bond);

$R^8$  is H, hydroxyl, mercaptan, or halogen, amino, azido,  $NR^{24}R^{25}$ , unsubstituted or substituted  $C_{1-20}$  alkyl or allyl, or  $-OR^{27}$ , where  $R^{27}$  is a glycosylic ether group (glycoside ether);

$R^9$  is H or OH, or together with  $R^{15}$  forms a bond ( $C_9$ - $C_{15}$  bond);

$R^{10}$  is H,  $CH_3$ , CHO, COOH, or a glycosylic ester (glycoside ester) of said COOH,  $CH_2O-R^{28}$  or  $-OR^{28}$ , where  $R^{28}$  is H or together with  $R^4$  forms a bond (lactone) or  $R^{10}$  together with  $R^1$  forms a bond ( $C_1$ - $C_{10}$  double bond);

$R^{11}$  is H, or OH or is absent;

$R^{12}$  is  $CH_3$ ,  $CH_2OH$ , COOH or a glycosylic ester (glycoside ester) of said COOH;

$R^{13}$  is methylene, or a divalent hetero-atom, or  $NR^{29}$ , where  $R^{29}$  is  $NHR^{30}$  or  $OR^{30}$  where  $R^{30}$  is H, or  $C_{1-20}$  alkyl; and a double bond is present between  $C_{16}$  and  $R^{13}$  when  $R^{11}$  is absent; or  $R^{13}$  is H, OH,  $CH_3$ , CHO,  $CH_2X$ , where X is halogen,  $CHNR^{29}$  where  $R^{29}$  is  $NHR^{30}$  or  $OR^{30}$  where  $R^{30}$  is H or  $C_{1-20}$  alkyl when  $R^{11}$  is H or OH; with the proviso that where  $R^{11}$  is OH,  $R^{13}$  is not OH;

$R^{14}$  is H or OH;

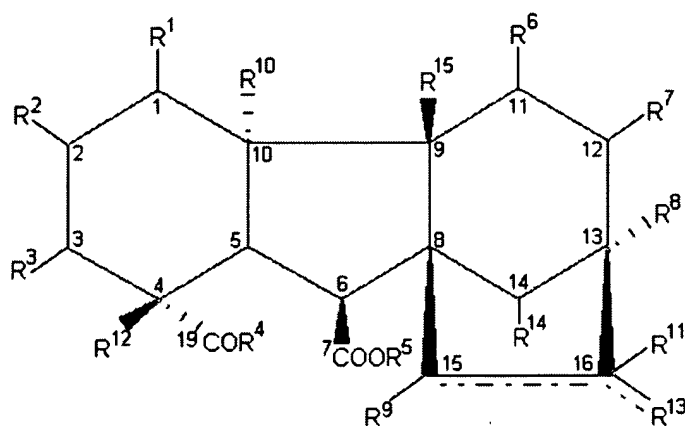
$R^{15}$  is H, or together with  $R^9$  forms a bond ( $C_9$ - $C_{15}$  bond);



and their pharmaceutically acceptable lactones, esters, active esters, salts and organic bases,

in combination with substances selected from the group consisting of insulin, its fragment derivatives, IGFs, and growth factors, or combinations thereof, to a patient in need thereof.

12. (Previously presented) A method of treatment for Type I and Type II diabetes and its complications and associated conditions comprising administering compounds selected from formula (1) (Gibberellins)



Formula (1)

wherein

$R^1$  is H or a group  $-O-R^{20}$ , where  $R^{20}$  is H, a glycosylic ether group (glycoside ether),  $C_{1-6}$  alkyl group, or  $R^1$  together with  $R^2$  or  $R^{10}$  forms a bond ( $C_1-C_2$  or  $C_1-C_{10}$  double bond, respectively);

$R^2$  is H or a group  $-O-R^{21}$ , where  $R^{21}$  is H, a glycosylic ether group (glycoside ether), or together with  $R^4$  forms a bond (lactone) or  $R^2$  together with  $R^1$  or  $R^3$  forms a bond ( $C_1-C_2$  or  $C_2-C_3$  double bond, respectively);

$R^3$  is H, =O, or  $-O-R^{22}$ , where  $R^{22}$  is H or a glycosylic ether group (glycoside ether), or  $R^3$  together with  $R^2$  forms a bond ( $C_2-C_3$  double bond);

$R^4$  is OH, or  $-OR^{23}$ , where  $R^{23}$  is unsubstituted or substituted  $C_{1-20}$  alkyl, allyl, amidine, or  $-NR^{24}R^{25}$ ;  $R^{24}$  and  $R^{25}$  may or may not be the same, are hydrogen, or  $C_{1-20}$  alkyl, or allyl; or  $R^4$  together with  $R^{21}$  or  $R^{28}$  forms a bond (lactone);

$R^5$  is H or a glycosylic ester (glycoside ester) group, or unsubstituted or substituted  $C_{1-20}$  alkyl esters, allyl esters, active esters;

$R^6$  is H or OH or together with  $R^7$  forms a bond ( $C_{11}-C_{12}$  double bond);

$R^7$  is H, =O, or  $-OR^{26}$ , where  $R^{26}$  is H or a glycosylic ether group (glycoside ether) or  $R^7$  together with  $R^6$  forms a bond ( $C_{11}-C_{12}$  double bond);

$R^8$  is H, hydroxyl, mercaptan, or halogen, amino, azido,  $NR^{24}R^{25}$ , unsubstituted or substituted  $C_{1-20}$  alkyl or allyl, or  $-OR^{27}$ , where  $R^{27}$  is a glycosylic ether group (glycoside ether);

$R^9$  is H or OH, or together with  $R^{15}$  forms a bond ( $C_9-C_{15}$  bond);

$R^{10}$  is H,  $CH_3$ , CHO, COOH, or a glycosylic ester (glycoside ester) of said COOH,  $CH_2O-R^{28}$  or  $-OR^{28}$ , where  $R^{28}$  is H or together with  $R^4$  forms a bond (lactone) or  $R^{10}$  together with  $R^1$  forms a bond ( $C_1-C_{10}$  double bond);

$R^{11}$  is H, or OH or is absent;

$R^{12}$  is  $CH_3$ ,  $CH_2OH$ , COOH or a glycosylic ester (glycoside ester) of said COOH;

$R^{13}$  is methylene, or a divalent hetero-atom, or  $NR^{29}$ , where  $R^{29}$  is  $NHR^{30}$  or  $OR^{30}$  where  $R^{30}$  is H, or  $C_{1-20}$  alkyl; and a double bond is present between  $C_{16}$  and  $R^{13}$  when  $R^{11}$  is absent; or  $R^{13}$  is H, OH,  $CH_3$  CHO,  $CH_2X$ , where X is halogen,  $CHNR^{29}$  where  $R^{29}$  is  $NHR^{30}$  or  $OR^{30}$  where  $R^{30}$  is H or  $C_{1-20}$  alkyl when  $R^{11}$  is H or OH; with the proviso that where  $R^{11}$  is OH,  $R^{13}$  is not OH;

$R^{14}$  is H or OH;

$R^{15}$  is H, or together with  $R^9$  forms a bond ( $C_9$ - $C_{15}$  bond);

and its pharmaceutically acceptable lactones, esters, active esters, salts and organic bases,

in combination with substances selected from the group consisting of insulin, its fragment derivatives, IGFs, and growth factors, or combinations thereof, along with other compatible therapeutic agents selected from the group consisting of analgesics, anti-hypertensive agents, sedatives, hypnotics, lipid-lowering agents, and anti-infective agents or combinations thereof, to a patient in need thereof.

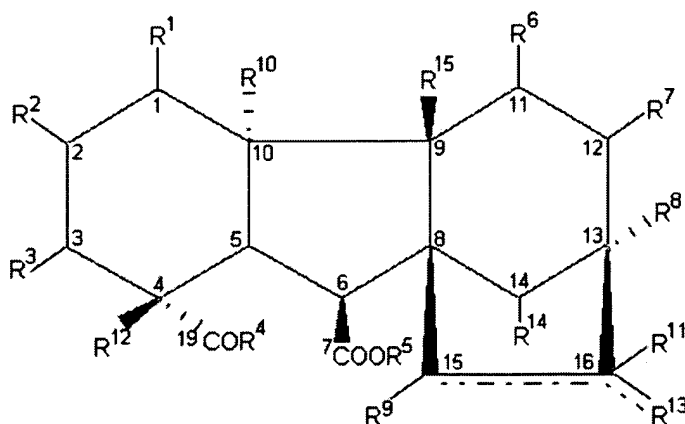
13. (Previously presented) The method according to claim 11, for the treatment of type 1 diabetes and its associated conditions.

14. (Previously presented) The method according to claim 11, for the treatment of type 2 diabetes and its associated conditions.

15. (Previously presented) The method according to claim 14, for the treatment of insulin resistant diabetes.

16. (Previously presented) The method according to claim 1, wherein the diabetic related complications and associated conditions are chosen from obesity, micro and macro vascular diseases, nephropathy, neuropathy and eye diseases.

17. (Previously presented) An anti-diabetic agent consisting essentially of a compound of formula (1)



Formula (1)

wherein

R<sup>1</sup> is H or a group -O-R<sup>20</sup>, where R<sup>20</sup> is H, a glycosylic ether group (glycoside ether), C<sub>1-6</sub> alkyl group, or R<sup>1</sup> together with R<sup>2</sup> or R<sup>10</sup> forms a bond (C<sub>1</sub>-C<sub>2</sub> or C<sub>1</sub>-C<sub>10</sub> double bond, respectively);

R<sup>2</sup> is H or a group -O-R<sup>21</sup>, where R<sup>21</sup> is H, a glycosylic ether group (glycoside ether), or together with R<sup>4</sup> forms a bond (lactone) or R<sup>2</sup> together with R<sup>1</sup> or R<sup>3</sup> forms a bond (C<sub>1</sub>-C<sub>2</sub> or C<sub>2</sub>-C<sub>3</sub> double bond, respectively);

R<sup>3</sup> is H, =O, or -O-R<sup>22</sup>, where R<sup>22</sup> is H or a glycosylic ether group (glycoside ether), or R<sup>3</sup> together with R<sup>2</sup> forms a bond (C<sub>2</sub>-C<sub>3</sub> double bond);

R<sup>4</sup> is OH, or -OR<sup>23</sup>, where R<sup>23</sup> is unsubstituted or substituted C<sub>1-20</sub> alkyl, allyl, amidine, or -NR<sup>24</sup>R<sup>25</sup>; R<sup>24</sup> and R<sup>25</sup> may or may not be the same, are hydrogen, C<sub>1-20</sub> alkyl, or allyl; or R<sup>4</sup> together with R<sup>21</sup> or R<sup>28</sup> forms a bond (lactone);

R<sup>5</sup> is H or a glycosylic ester (glycoside ester) group, or unsubstituted or substituted C<sub>1-20</sub> alkyl esters, allyl esters, active esters;

R<sup>6</sup> is H or OH or together with R<sup>7</sup> forms a bond (C<sub>11</sub>-C<sub>12</sub> double bond);

R<sup>7</sup> is H, =O, or -OR<sup>26</sup>, where R<sup>26</sup> is H or a glycosylic ether group (glycoside ether) or R<sup>7</sup> together with R<sup>6</sup> forms a bond (C<sub>11</sub>-C<sub>12</sub> double bond);

R<sup>8</sup> is H, hydroxyl, mercaptan, or halogen, amino, azido, NR<sup>24</sup>R<sup>25</sup>, unsubstituted or substituted C<sub>1-20</sub> alkyl or allyl, or -OR<sup>27</sup>, where R<sup>27</sup> is a glycosylic ether group (glycoside ether);

R<sup>9</sup> is H or OH, or together with R<sup>15</sup> forms a bond (C<sub>9</sub>-C<sub>15</sub> bond);

R<sup>10</sup> is H, CH<sub>3</sub>, CHO, COOH, or a glycosylic ester (glycoside ester) of said COOH, CH<sub>2</sub>O-R<sup>28</sup> or -OR<sup>28</sup>, where R<sup>28</sup> is H or together with R<sup>4</sup> forms a bond (lactone) or R<sup>10</sup> together with R<sup>1</sup> forms a bond (C<sub>1</sub>-C<sub>10</sub> double bond);

R<sup>11</sup> is H, or OH or is absent;

R<sup>12</sup> is CH<sub>3</sub>, CH<sub>2</sub>OH, COOH or a glycosylic ester (glycoside ester) of said COOH;

R<sup>13</sup> is methylene, or a divalent hetero-atom, or NR<sup>29</sup>, where R<sup>29</sup> is NHR<sup>30</sup> or OR<sup>30</sup> where R<sup>30</sup> is H, or C<sub>1-20</sub> alkyl; and a double bond is present between C<sub>16</sub> and R<sup>13</sup> when R<sup>11</sup> is absent; or R<sup>13</sup> is H, OH, CH<sub>3</sub>, CHO, CH<sub>2</sub>X, where X is halogen, CHNR<sup>29</sup> where R<sup>29</sup> is NHR<sup>30</sup> or OR<sup>30</sup> where R<sup>30</sup> is H or C<sub>1-20</sub> alkyl when R<sup>11</sup> is H or OH; with the proviso that where R<sup>11</sup> is OH, R<sup>13</sup> is not OH;

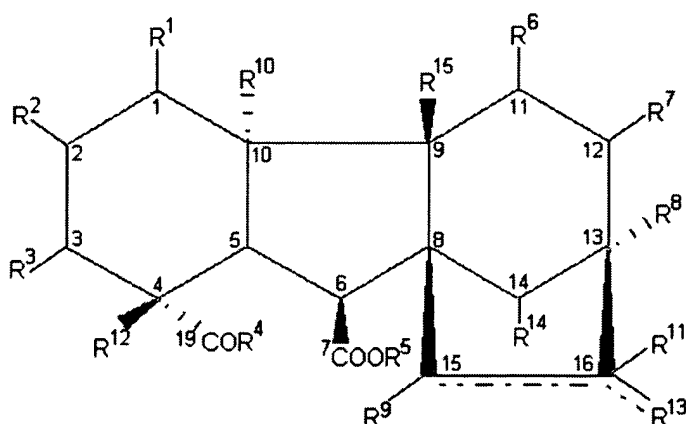
R<sup>14</sup> is H or OH;

$R^{15}$  is H, or together with  $R^9$  forms a bond ( $C_9-C_{15}$  bond);

and/or its pharmaceutically acceptable lactones, esters, active esters, salts and organic bases as an active ingredient, in combination with substances selected from the group consisting of insulin, its fragment derivatives, IGFs, and growth factors, or combinations thereof, together with a pharmaceutically acceptable carrier.

18. (Original) An anti-diabetic agent according to claim 17, wherein the agent is a medicament suitable for administration with a medicator.

19. (Previously presented) An anti-diabetic agent consisting essentially of a compound of formula (1)



Formula (1)

wherein

$R^1$  is H or a group  $-O-R^{20}$ , where  $R^{20}$  is H, a glycosylic ether group (glycoside ether),  $C_{1-6}$  alkyl group, or  $R^1$  together with  $R^2$  or  $R^{10}$  forms a bond ( $C_1-C_2$  or  $C_1-C_{10}$  double bond, respectively);

$R^2$  is H or a group  $-O-R^{21}$ , where  $R^{21}$  is H, a glycosylic ether group (glycoside ether), or together with  $R^4$  forms a bond (lactone) or  $R^2$  together with  $R^1$  or  $R^3$  forms a bond ( $C_1-C_2$  or  $C_2-C_3$  double bond, respectively);

$R^3$  is H,  $=O$ , or  $-O-R^{22}$ , where  $R^{22}$  is H or a glycosylic ether group (glycoside ether), or  $R^3$  together with  $R^2$  forms a bond ( $C_2-C_3$  double bond);

$R^4$  is OH, or  $-OR^{23}$ , where  $R^{23}$  is unsubstituted or substituted  $C_{1-20}$  alkyl, allyl, amidine, or  $-NR^{24}R^{25}$ ;  $R^{24}$  and  $R^{25}$  may or may not be the same, are hydrogen,  $C_{1-20}$  alkyl, or allyl; or  $R^4$  together with  $R^{21}$  or  $R^{28}$  forms a bond (lactone);

$R^5$  is H or a glycosylic ester (glycoside ester) group, or unsubstituted or substituted  $C_{1-20}$  alkyl esters, allyl esters, active esters;

$R^6$  is H or OH or together with  $R^7$  forms a bond ( $C_{11}-C_{12}$  double bond);

$R^7$  is H,  $=O$ , or  $-OR^{26}$ , where  $R^{26}$  is H or a glycosylic ether group (glycoside ether) or  $R^7$  together with  $R^6$  forms a bond ( $C_{11}-C_{12}$  double bond);

$R^8$  is H, hydroxyl, mercaptan, or halogen, amino, azido,  $NR^{24}R^{25}$ , unsubstituted or substituted  $C_{1-20}$  alkyl or allyl, or  $-OR^{27}$ , where  $R^{27}$  is a glycosylic ether group (glycoside ether);

$R^9$  is H or OH, or together with  $R^{15}$  forms a bond ( $C_9-C_{15}$  bond);

$R^{10}$  is H,  $CH_3$ ,  $CHO$ ,  $COOH$ , or a glycosylic ester (glycoside ester) of said  $COOH$ ,  $CH_2O-R^{28}$  or  $-OR^{28}$ , where  $R^{28}$  is H or together with  $R^4$  forms a bond (lactone) or  $R^{10}$  together with  $R^1$  forms a bond ( $C_1-C_{10}$  double bond);

$R^{11}$  is H, or OH or is absent;

$R^{12}$  is  $CH_3$ ,  $CH_2OH$ ,  $COOH$  or a glycosylic ester (glycoside ester) of said  $COOH$ ;

$R^{13}$  is methylene, or a divalent hetero-atom, or  $NR^{29}$ , where  $R^{29}$  is  $NHR^{30}$  or  $OR^{30}$  where  $R^{30}$  is H, or  $C_{1-20}$  alkyl; and a double bond is present between  $C_{16}$  and  $R^{13}$  when  $R^{11}$  is absent; or  $R^{13}$  is H, OH,  $CH_3$  CHO,  $CH_2X$ , where X is halogen,  $CHNR^{29}$  where  $R^{29}$  is  $NHR^{30}$  or  $OR^{30}$  where  $R^{30}$  is H or  $C_{1-20}$  alkyl when  $R^{11}$  is H or OH; with the proviso that where  $R^{11}$  is OH,  $R^{13}$  is not OH;

$R^{14}$  is H or OH;

$R^{15}$  is H, or together with  $R^9$  forms a bond ( $C_9$ - $C_{15}$  bond);

and/or its pharmaceutically acceptable lactones, esters, active esters, salts and organic bases as an active ingredient, in combination with substances selected from the group consisting of insulin, its fragment derivatives, IGFs, and growth factors, or combinations thereof, together with pharmaceutically acceptable carriers or excipients, wherein the agent is a slow release composition.

20. (Original) An anti-diabetic agent according to claim 17, wherein the agent is for oral administration.

21. (Original) An anti-diabetic agent according to claim 17, wherein the agent is for inhalation administration.

22. (Original) An anti-diabetic agent according to claim 17, wherein the agent is for transdermal administration.

23. (Original) An anti-diabetic agent according to claim 17, wherein the agent is for parenteral injection.



24. (Original) An anti-diabetic agent according to claim 17, wherein the agent is for topical, rectal, or vaginal administration.

25. (Canceled)

26. (Previously presented) An anti-diabetic agent according to claim 17, wherein the pharmaceutically acceptable salt is a sodium salt of formula (1).

27. (Previously presented) An anti-diabetic agent according to claim 17, wherein the pharmaceutically acceptable salt is a zinc salt of formula (1).

28. (Previously presented) An anti-diabetic agent according to claim 17, wherein the pharmaceutically acceptable ester is a ethyl ester of formula (1).

29. (Currently Amended) A method of manufacturing an anti-diabetic agent according to claim 17, comprising combining a compound selected from formula (1) and its pharmaceutically acceptable lactones, esters, active esters, salts and organic bases in combination with substances selected from the group consisting of insulin, its fragment derivatives, IGFs, and growth factors, or combinations thereof, with a pharmaceutically acceptable carrier.

30. (Withdrawn) A process for the preparation of Gibberellins including Gibberellin A<sub>3</sub>, including the steps of:

- (a) incubating a Gibberellin-producing strain of microorganism in a fermentation broth;
- (b) adjusting the pH of the fermentation broth to pH 6.5 to 7.0 and filtering to obtain a filter cake of microorganism mycelium, and a filtrate;
- (c) washing the filter cake with water and combining the washing with the filtrate to form an aqueous solution;

- (d) concentrating the aqueous solution;
- (e) mixing the aqueous solution with an organic solvent at a temperature of 5 to 10°C and adjusting the pH of the mixture to less than 2.0;
- (f) allowing the mixture to separate into an aqueous phase and a first organic phase and removing the first organic phase;
- (g) re-extracting the aqueous phase from step (f) with organic solvent to obtain a second organic phase;
- (h) combining the first and second organic phases and concentrating to form a concentrated organic solution;
- (i) heating the concentrated organic solution at 60-70°C for 3 to 4 hours with stirring, until the precipitation of solid matter ceases;
- (j) cooling the concentrated organic solution to room temperature and filtering to obtain a precipitate;
- (k) washing the precipitate in cold organic solvent and drying to obtain an off-white solid containing about 80% Gibberellin A<sub>3</sub>, about 4% Gibberellin A<sub>4</sub> and about 4% Gibberellin A<sub>7</sub>.

31. (Withdrawn) The process of claim 30, comprising the further steps of:

- (l) dissolving the off-white solid in a mixture of 32.6% methanol, 2.2% water and 65.2% acetone to obtain a Gibberellin solution;
- (m) diluting the Gibberellin solution with a 10:1 mixture of organic solvent and water;
- (n) filtering the diluted Gibberellin solution and concentrating the filtrate by vacuum evaporation;
- (o) heating the concentrate to a temperature of 60 to 80°C for 2 to 3 hours with stirring, cooling to room temperature and filtering to obtain a solid crystalline precipitate;
- (p) washing the precipitate with cold organic solvent and drying to obtain Gibberellin A<sub>3</sub> crystals.

32. (Withdrawn) A process according to claim 30 wherein the Gibberellin-producing strain of microorganism is *Gibberella fujikuroi*.

33. (Withdrawn) A process according to claim 30, wherein the concentration of the solutions in steps (d) and (h) is achieved using vacuum evaporation.

34. (Withdrawn) A process according to claim 30 wherein the organic solvent is ethyl acetate.

35. (Withdrawn) A process according to claim 31 wherein the organic solvent is ethyl acetate.

36. (Withdrawn) A process according to claim 31 comprising the further steps of:

- (q) dissolving the Gibberellin A<sub>3</sub> in methanol;
- (r) adding the Gibberellin solution to an equimolar aqueous solution of NaHCO<sub>3</sub>;
- (s) evaporating the mixed solutions to dryness to obtain a solid residue;
- (t) dissolving the residue in water and freeze drying to obtain Gibberellin A<sub>3</sub> sodium salt.

37. (Withdrawn) A process according to claim 36, comprising the further steps of dissolving the Gibberellin A<sub>3</sub> sodium salt in water, passing the solution through a column loaded with a zinc ion-exchange resin, washing the column with water, collecting and combining the effluent and washings and removing the water to obtain Gibberellin A<sub>3</sub> zinc salt.

38. (Withdrawn) A process according to claim 31 comprising the further steps of:

- (q) dissolving the Gibberellin A<sub>3</sub> in a 50:1 ratio mixture of acetone to water;

(r) mixing the Gibberellin A<sub>3</sub> solution with equimolar amounts of triethylamine and ethyl chloroformate, and a one tenth molar amount of N-methyl morpholine, and stirring at -15°C for 20 minutes;

(s) diluting the resultant mixture with anhydrous ethanol and stirring at room temperature;

(t) evaporating the diluted mixture to dryness and partitioning the residue between ethyl acetate and water in a 6:1 ratio;

separating the ethyl acetate layer, washing with 2% HCl, followed by water, followed by 5% NaHCO<sub>3</sub>, followed by water, and evaporating under reduced pressure to dryness to give Gibberellin A<sub>3</sub> ethyl ester.

39. (Previously presented) The method of claim 11, wherein the complications and associated conditions of diabetes are one or more of: obesity, micro and macro vascular diseases, nephropathy, neuropathy, eye diseases, and diabetic ulcerations.

40. (Previously presented) The method of claim 11, wherein the pharmaceutically acceptable salts are selected from alkali metal salts, alkaline earth metal salts, metal, and salts of ammonium or salts of organic bases.

41. (Previously presented) The method of claim 40, wherein the organic bases are lidocaine, or NR<sup>16</sup> R<sup>17</sup> R<sup>18</sup> R<sup>19</sup>, where R<sup>16</sup>, R<sup>17</sup>, R<sup>18</sup>, R<sup>19</sup>, which may be the same or not the same, are hydrogen, or substituted or unsubstituted C<sub>1-20</sub> alkyl, alkanol, or aryl groups.